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मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

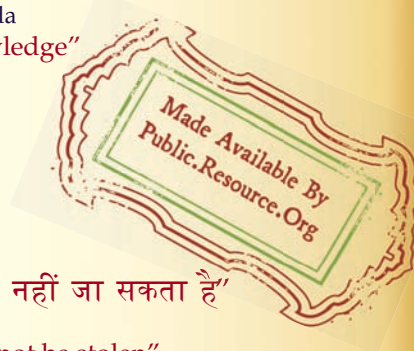
IS 12923 (1990): Cane GUR (Jaggery) [FAD 2: Sugar Industry]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS 12923 : 1990

Indian Standard
CANE *GUR* (JAGGERY) — SPECIFICATION

UDC 664'1 *GUR*

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

August 1990

Price Group 1

**AMENDMENT NO. 1 JULY 2002
TO
IS 12923 : 1990 CANE GUR (JAGGERY)
—SPECIFICATION**

(Page 1, clause 7.2) — Insert the following clause after 7.2:

'7.2.1 BIS Certification Marking

The product may also be marked with the Standard Mark.

7.2.1.1 The use of the Standard Mark is governed by the provisions of *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers, may be obtained from the Bureau of Indian Standards.'

(FAD 2)

Reprography Unit, BIS, New Delhi, India

**AMENDMENT NO. 2 JULY 2003
TO
IS 12923 : 1990 CANE GUR (JAGGERY) —
SPECIFICATION**

(*Page 1, clause 7.1*) — Insert the following new clause after 7.1:

'7.1.1 In case of smaller consumer packs, the product shall be packed in food-grade plastics conforming to relevant Indian Standard or any other suitable non-toxic materials.'

(FAD 2)

Reprography Unit, BIS, New Delhi, India

AMENDMENT NO. 3 JUNE 2011
TO
IS 12923 : 1990 CANE GUR (JAGGERY) — SPECIFICATION

(Page 1, clause 2) — Substitute the following for the existing:

‘2 REFERENCE

The following standards contain provisions, which through reference in this text constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
1070 : 1992	Reagent grade water (<i>third revision</i>)
15279 : 2003	Sugar and sugar products — Methods of test

[Page 1, clause 7.2(c)] — Substitute ‘Net quantity’ for ‘Net mass’.

[Page 1, clause 7.2(e)] — Add the following after Sl No. (e):

- ‘f) Any other requirements as given under the *Standards of Weights and Measures (Packaged Commodities) Rules*, 1977 and the *Prevention of Food Adulteration Act*, 1955 and the Rules framed thereunder.’

(Page 2, Table 1) — Substitute the following for the existing table:

Amend No. 3 to IS 12923 : 1990**Table 1 Requirement for Cane GUR**
(Clauses 4.3 and 6.1)

Sl No.	Characteristic	Requirement		Method of Test, Ref to	
		Grade 1	Grade 2	Annex of This Standard	Clause of IS 15279
(1)	(2)	(3)	(4)	(5)	(6)
i)	Sucrose (on dry basis), percent by mass, <i>Min</i>	80	70	—	12
ii)	Reducing sugars (on dry basis), percent by mass, <i>Max</i>	10	20	—	7
iii)	Moisture, percent by mass, <i>Max</i>	5	7	—	4
iv)	Water insoluble matter (on dry basis), percent by mass, <i>Max</i>	1.5	2.0	—	14
v)	Sulphated ash (on dry basis), percent by mass, <i>Max</i>	3.5	5.0	—	10
vi)	Sulphur dioxide (on dry basis) ppm, <i>Max</i>	50	50	—	13
vii)	Ash insoluble in dilute hydrochloric acid (on dry basis), percent by mass, <i>Max</i>	0.3	0.3	A	—

NOTE — Total sugar (expressed as invert sugar) (on dry basis) shall be 90 percent for both Grade 1 and Grade 2 cane GUR.

(FAD 2)

Reprography Unit, BIS, New Delhi, India

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards on 28 February 1990, after the draft finalized by the Sugar Industry Sectional Committee had been approved by the Food and Agriculture Division Council.

Cane *GUR* is prepared from clarified juice of sugarcane, by heating in open pans. The clarification may be effected by the usual vegetable clarificants or chemicals and by adequately removing scum during boiling. Cane *GUR* is used for human consumption, for stock feeding, for sweetmeat making and for other purposes. It is estimated that more than 75 percent of cane *GUR* is used for direct human consumption.

The quality and chemical composition of cane *GUR* produced in different regions of the country varies widely due to differences in the cane varieties used, soil type, cultivation practices followed, and manufacturing techniques adopted. In the absence of objective and enforceable standards, each part of the country tends to follow the local practices as to quality attributes for cane *GUR*. Precise grade specifications are also needed for export purposes, as and when needed. Therefore, it is felt that this Standard will go a long way in helping the industry in manufacturing cane *GUR* of a good quality.

In the preparation of this standard, due consideration has been given to the relevant Rules prescribed by the Government of India, under the *Prevention of Food Adulteration Act*, 1954 and *Standards of Weights and Measures (Packaged Commodities) Rules*, 1977. The standard is however, subject to the restrictions imposed under these, wherever applicable.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

CANE GUR (JAGGERY) — SPECIFICATION

1 SCOPE

1.1 This standard prescribes the requirements and methods of test for cane *GUR* (jaggery) for human consumption, manufactured from sugar-cane juice.

2 REFERENCES

2.1 The following Indian Standards are necessary adjuncts to this standard:

<i>IS No.</i>	<i>Title</i>
1070 : 1977	Specification for water for general laboratory use (<i>second revision</i>)
1152 : 1976	Specification for icing sugar (<i>first revision</i>)
1679 : 1960	Specification for sugar used in food preservation industry.
5982 : 1970	Specification for plantation white sugar for identification from other sugars

3 GRADES

3.1 There shall be two grades of cane *GUR*, namely, Grade 1 and Grade 2.

4 REQUIREMENTS

4.1 Description

Cane *GUR* shall be prepared in the form of solid lumps which shall be of firm consistency. It shall be golden yellow to light brown in colour, free from dirt, other extraneous matter and substances deleterious to health.

4.2 Cane *GUR* shall be sweet to taste and shall not possess sour, salty or any other objectionable taste.

4.3 The material shall also comply with requirements of Table 1.

5 SAMPLING

5.1 Sampling shall be done as agreed to between the purchaser and the supplier.

6 TESTS

6.1 Tests shall be carried out in accordance with the methods prescribed in col 5 of Table 1.

6.2 Quality of Reagents

Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (*see* IS 1070 : 1977) shall be used where the use of water as a reagent is intended.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the result of analysis.

7 PACKING AND MARKING

7.1 Packing

The material shall be packed in clean, sound and new jute polyethylene lined or polyethylene bags. The mouth of each bag may be either machine stitched or rolled over and hand stitched.

7.2 Marking

Each bag shall be suitably marked so as to give following information:

- a) Name of the material;
- b) Indication of the source of manufacture;
- c) Net mass of cane *GUR* in the bag;
- d) Season of manufacture; and
- e) Grade of cane *GUR*.

Table 1. Requirements for Cane GUR
(Clauses 4.3 and 6.1)

Sl No.	Characteristic	Requirements for		Method of Test, Ref to
		Grade 1	Grade 2	
(1)	(2)	(3)	(4)	(5)
i)	Sucrose (on dry basis) percent by mass, <i>Min</i>	80	70	Appendix D of IS 1152 : 1976
ii)	Reducing sugars (on dry basis), percent by mass, <i>Max</i>	10	20	Appendix C of IS 5982 : 1970
iii)	Moisture, percent by mass, <i>Max</i>	5	7	Appendix A of IS 5982 : 1970
iv)	Water insoluble matter (on dry basis), percent by mass, <i>Max</i>	1.5	2.0	Appendix H of IS 5982 : 1970
v)	Sulphated ash (on dry basis), percent by mass, <i>Max</i>	3.5	5.0	Appendix G of IS 1679 : 1960
vi)	Sulphur dioxide (on dry basis) ppm, <i>Max</i>	50	50	Appendix E of IS 5982 : 1970
vii)	Ash insoluble in dilute hydrochloric acid, (on dry basis) percent by mass, <i>Max</i>	0.3	0.3	Annex A of this standard

NOTE — Total sugar (expressed as invert sugar) (on dry basis) shall be 90 percent for both Grade 1 and Grade 2 cane GUR.

ANNEX A

[Table 1, Item (vii)]

DETERMINATION OF ACID INSOLUBLE ASH

A-1 REAGENT

A-1.1 Dilute Hydrochloric Acid

Approximately 5 N (prepared from concentrated hydrochloric acid).

A-2 PROCEDURE

A-2.1 Weigh accurately about 5 g of the sample in a tared, clean and dry platinum basin of 100 ml capacity. Carbonize the material in the dish with the flame of a burner. Complete the ignition by keeping in a muffle furnace at $550 \pm 25^\circ\text{C}$ until grey ash results. Cool in a desiccator. To the ash, add 25 ml of the dilute hydrochloric acid, cover with a watch glass and heat on a small flame of a burner to near boiling. Allow to cool and filter the contents of dish through Whatman filter paper No. 42 or its equivalent. Wash the filter paper with hot water until the washings are free from chlorides. Return the

filter paper and the residue to the dish. Keep it in an air-oven maintained at $105 \pm 2^\circ\text{C}$ for about 3 hours. Ignite in the muffle furnace at $550 \pm 25^\circ\text{C}$ for one hour. Cool the dish in a desiccator and weigh. Heat again for 30 minutes in the muffle furnace, cool and weigh. Repeat this process of heating for 30 minutes, cooling and weighing till the difference between two successive weighings is less than one milligram. Note the lowest mass.

A-3 CALCULATION

A-3.1 Acid insoluble ash, percent by mass $= \frac{100 M_1}{M_2}$

where

M_1 = mass in g of the acid insoluble ash, and

M_2 = mass in g of the sample taken for the test.

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Bureau of Indian Standards

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